

Find the value of c that completes the square.

1) $z^2 + 10z + c$

2) $x^2 - 26x + c$

3) $n^2 - 36n + c$

4) $x^2 + 12x + c$

5) $x^2 - 5x + c$

6) $x^2 + \frac{13}{10}x + c$

Find the value that completes the square and then rewrite as a perfect square.

7) $x^2 - 16x + \underline{\hspace{1cm}}$

8) $m^2 - 2m + \underline{\hspace{1cm}}$

9) $y^2 + 17y + \underline{\hspace{1cm}}$

10) $r^2 + 15r + \underline{\hspace{1cm}}$

Solve each equation by completing the square.

11) $b^2 + 20b + 84 = 0$

12) $r^2 - 14r - 72 = 0$

13) $a^2 - 16a + 100 = 0$

14) $k^2 + 6k - 1 = -2$

15) $x^2 + 16x - 94 = -10$

16) $k^2 = -12k - 75$

$$17) n^2 + 9n - 52 = 0$$

$$18) p^2 + 7p + 32 = 0$$

$$19) v^2 - 19v + 58 = 7$$

$$20) m^2 - 15m - 71 = 5$$